

CLAIMS

1. A method of retransmission protocol reset synchronisation in a radio network of a communication system, said radio network including at least one radio network controller RNC for controlling a plurality of base stations in communication with mobile terminals, wherein the RNC communicates with a communication terminal using a radio link control RLC procedure and the plurality of base stations communicate with the mobile terminals using a medium access control MAC procedure, comprising the steps of:

performing a RLC reset procedure by an RLC sending entity;

initiating a MAC reset procedure in response to a RLC reset procedure .

2. The method according to claim 1, wherein the RLC reset procedure is initiated upon occurrence of unrecoverable protocol error or upon reaching a predetermined number of retransmissions or upon transmitting a discard notification for a predetermined number of times.
3. The method according to claim 1, wherein the MAC reset procedure is carried out at the base station and the mobile terminal.
4. The method according to claims 1, wherein the MAC reset procedure in the base station is initiated by a MAC release request message sent by the RNC.
5. The method according to claims 1, wherein the MAC reset procedure in the mobile terminal is initiated by a channel reconfiguration message included in a radio resource control RRC protocol sent from the RNC to the mobile terminal.
6. The method according to claims 1, wherein the MAC reset procedure in the mobile terminal is initiated by a reset request primitive sent from the receiving RLC entity to the receiving MAC entity upon receiving a RLC RESET protocol data unit PDU.

7. The method according to claims 1, wherein the radio network is the UMTS terrestrial radio access network UTRAN using high speed downlink packet access HSDPA for data transmission.
8. The method according to claim 7, wherein the RLC procedure and MAC procedure transmit protocol data units PDUs over the network employing a hybrid automatic repeat request HARQ protocol where erroneous packets are stored for subsequent combining.
9. The method according to claim 8, wherein remaining RLC PDUs stored in a priority queue at a base station shall not be transmitted once an RLC reset procedure has been invoked.
10. The method according to claims 8 or 9, wherein the MAC PDUs containing RLC PDUs remaining in a reordering or soft buffer of the mobile terminal are flushed once RLC reset procedure has been invoked.
11. The method according to claim 8, wherein the MAC PDUs contain a reset identification RID field comprising logical channel identification.
12. The method according to claim 10 or 11, wherein the MAC reset procedure with partial priority queue flush in the base station is initiated when receiving a MAC PDU with predefined inband identification and RID field.
13. The method according to claim 10 or 11, wherein the MAC reset procedure with partial priority queue flush in the base station is initiated when receiving a MAC release request message with RID field as an information element.
14. The method according to claim 1, wherein the radio network is the UMTS terrestrial radio access network using enhanced uplink dedicated channel (EUDCH) access employing HARQ protocol where erroneous packets are stored for subsequent combining.